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## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> F21K 2/00, 2/06, F41C 3/00, F21P 1/02, B05B 17/08, A23L 1/03, 2/00, A23G 1/00, 9/02, A23K 1/18, D06Q 1/00, A63H 27/10, A61K 7/00, 7/16, 9/127, C09D 11/00, 17/00, A45C 1/00, F42B 4/00, C12N 9/02, 11/02, F42B 3/00, B65D 83/00, A01K 67/027, C05G 3/00, C12N 15/52, B65D 81/32, F41B 9/00, B05B 11/00	<b>A3</b>	<b>(11) International Publication Number:</b> WO 97/29319  <b>(43) International Publication Date:</b> 14 August 1997 (14.08.97)
<b>(21) International Application Number:</b> PCT/US97/01699  <b>(22) International Filing Date:</b> 3 February 1997 (03.02.97)  <b>(30) Priority Data:</b> 597,274                      6 February 1996 (06.02.96)      US 757,046                      25 November 1996 (25.11.96)      US  <b>(71)(72) Applicant and Inventor:</b> BRYAN, Bruce, J. [US/US]; 716 Arden Drive, Beverly Hills, CA 90210 (US).  <b>(74) Agent:</b> SEIDMAN, Stephanie, L.; Brown Martin Haller & McClain, 1660 Union Street, San Diego, CA 92101-2926 (US).	<b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.          Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>  <b>(88) Date of publication of the international search report:</b> 11 December 1997 (11.12.97)	

**(54) Title:** BIOLUMINESCENT NOVELTY ITEMS**(57) Abstract**

Systems and apparatus for generating bioluminescence, and combinations of these systems and apparatus with inanimate articles of manufacture to produce novelty items are provided. These novelty items, which are articles of manufacture, are designed for entertainment, recreation and amusement, and include toys, paints, slimy play material, textiles, particularly clothing, bubbles in bubble making toys and other toys that produce bubbles, balloons, personal items, such as bath powders, body lotions, gels, powders and creams, toothpastes and other dentifrices, soaps, body paints, and bubble bath, foods, such as gelatins, icings and frostings, beverages such as beer, wine, champagne, soft drinks, and glowing ice, fountains, including liquid "fireworks" and other such jets or sprays or aerosols of compositions that are solutions, mixtures, suspensions, powders, pastes, particles or other suitable formulation. Cartridges for charging and/or recharging the novelty items with bioluminescence generating systems are also provided.

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 97/01699

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6	F21K2/00	F21K2/06	F41C3/00	F21P1/02	B05B17/08
	A23L1/03	A23L2/00	A23G1/00	A23G9/02	A23K1/18
	D06Q1/00	A63H27/10	A61K7/00	A61K7/16	A61K9/127

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 F21K C12N B65D F41B B05B

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	WO 94 04918 A (SLATER & AL) 3 March 1994	1-3,5,8, 73,77
A	see the whole document	50,51, 54,69,87
X	US 5 383 100 A (J.P.KIKOS) 17 January 1995	1,2,5, 54,55,77
	see the whole document	
A	FR 2 292 595 A (JOURDAIN) 25 June 1976	5,6,9
	see the whole document	

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Date of the actual completion of the international search

7 October 1997

Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

International Application No

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6	C09D11/00	C09D17/00	A45C1/00	F42B4/00	C12N9/02
	C12N11/02	F42B3/00	B65D83/00	A01K67/027	C05G3/00
	C12N15/52	B65D81/32	F41B9/00	B05B11/00	

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## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Section Ch, Week 9546 Derwent Publications Ltd., London, GB; Class B04, AN 95-354274 XP002042687 & JP 07 241 192 A (HARATA K) , 19 September 1995 see abstract ---	12-16, 18
X	GB 1 105 927 A (MILES) 13 March 1968 see page 3, line 85-91 see page 4, line 72-81 see claims 1-14; example 9 ---	20-23
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Date of the actual completion of the international search

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Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 97/01699

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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X	<p>DATABASE INSPEC INSTITUTE OF ELECTRICAL ENGINEERS, STEVENAGE, GB Inspec No. 3715919, GAUTIER S M ET AL: "Alternate determination of ATP and NADH with a single bioluminescence-based fiber-optic sensor" XP002042686 see abstract &amp; 5TH INTERNATIONAL CONFERENCE ON SOLID-STATE SENSORS AND ACTUATORS AND EUROSENSORS III, MONTREUX, SWITZERLAND, 25-30 JUNE 1989, vol. B1, no. 1-6, ISSN 0925-4005, SENSORS AND ACTUATORS B (CHEMICAL), JAN. 1990, SWITZERLAND, pages 580-584.</p>	20-22
A	<p>EP 0 302 819 A (HILTI) 8 February 1989 see the whole document</p>	26,31,34
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2 X	<p>WO 92 04577 A (COLLET) 19 March 1992  see the whole document</p>	45,46, 53,58, 59,68
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# INTERNATIONAL SEARCH REPORT

Int. l. Application No

PCT/US 97/01699

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 563 726 A (N.F.NEWCOMB & AL) 7 January 1986 see the whole document ---	45,46
A	EP 0 246 174 A (EXTRAITS NOIROT) 19 November 1987  see the whole document ---	6,8,50, 87-89, 92,95
A	US 4 765 510 A (V.N.RENDE) 23 August 1988  see the whole document -----	42, 98-102

# INTERNATIONAL SEARCH REPORT

International application No.

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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

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## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.



# INTERNATIONAL SEARCH REPORT

international Application No. PCT/US 97 01699

## FURTHER INFORMATION CONTINUED FROM PCT/ISA210

1. Claims : 1-11, 24, 25, 40, 43, 50, 52, 54-47, 69-77, 80, 81, 87-102
2. Claims : 12-19
3. Claims : 20-23
4. Claims : 26-38
5. Claim : 39
6. Claim : 44
7. Claims : 45-46(partially), 53
8. Claims : 45-46(partially), 58, 59
9. Claims : 45-46(partially)68
10. Claims : 45-46(partially), 82, 83
11. Claims : 47-49, 60-64
12. Claims : 78, 79
13. Claims : 86

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Information on patent family members

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PCT/US 97/01699

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